

**REMARKS**

Review and reconsideration of the Advisory Action of September 5, 2007, as amplified by the Examiner Interview of August 30, 2007, is respectfully requested in consideration of the above amendments and the following remarks.

In the Interview of August 30, 2007 Applicants argued that the claims were in condition for allowance since:

(a) the claims are precisely tailored to the invention (1,2-alkanediol 1 + 1,2-alkanediol 2 = synergism) and

(b) Cupferman teaching antimicrobial + at least one polyol = synergism only incidentally suggests combinations of polyols, but does not teach that there may be synergism with a very select (only five possible active agents) combination of polyols as presently claimed. I argued that any prima facie showing of obviousness to use more than one polyol (as interchangeable, equivalents) according to Cupferman is overcome by the showing in Table 7 and discussion in paragraph 118 of the present specification of synergistic anti-microbial properties.

Regarding (a), Applicants pointed out that language had been added to tie the synergistic result to the 1,2-alkanediols, but suggested willingness to even further limit the claims as follows:

1. (currently amended) An antimicrobial composition, comprising an antimicrobial effective amount of a mixture of two, three or more straight-chain 1,2-alkanediols, the chain lengths of which (i) are different and (ii) in each case are in the range of 5 to 10 C atoms, wherein said effective amount is that amount which results in a Kull value of less than 1 for the antimicrobial effect exhibited by said **mixture of** 1,2-alkanediols.

Applicants urged that in Clarkson the iron (III) chelator is the antimicrobial agent, and that the alcohol carrier fluid and the solubility promotor are merely used to allow the chelator to

be formulated into a stable composition. There is no suggestion that the solubility promoter itself has anti-microbial effect.

Applicants pointed out that Cupferman teaches the combination of a polyol with a specific antimicrobial results in a synergistic antimicrobial action, but nowhere is there teaching that the combination of two different C5-C10 straight chain polyols produces synergistic antimicrobial action.

Examiner Chong then explained his position: Applicant claims synergism where at least one ingredient is an alkanediol. Cupferman teaches synergism where one of the agents is a polyol and the other is not. Cupferman teaching of synergism where one ingredient is a polyol renders obvious synergism where both ingredients are polyols.

Applicants argued that synergism is a result of interaction of ingredients, one can not change ingredients and expect synergism. Cupferman teaches combination of two specific and essential ingredients, the synergism resulting from this combination can not simply be transferred to different combinations of ingredients, so the position of the Examiner was technically improper.

Further, Applicants pointed out that even if Cupferman suggested the possibility of combinations of polyols, Applicants would concede that there would be much prior art teaching permissibility of combinations of polyols for various reasons, but such a showing of prima facie obviousness would be overcome by showing unexpected results, and no art teaches our synergism of anti-microbial activity resulting from our specific and precisely limited (only five possible) 1,2-alkanediols.

The Examiner said this argument might apply to claim 7, but not to claim 1, since claim 1 was not limited to C5-10.

Applicant pointed out that the C5-10 limitation was in claim 1. The Examiner then found the limitation.

Applicants next referred the Examiner to page 3 of the Office Action, the Examiner's statement "The instant claims are directed to a synergistic anti-microbial composition comprising

two or more 1,2-alkanediols and a preservative." Applicants argued that while they did not exclude the possibility of other preservatives (antimicrobials), our synergism was produced only by specific 1,2-alkanediols, and the claim limitation proposed today ("mixture of") would clarify the connection between synergism and the mixture.

The Examiner asked if Applicants had support in our specification for synergism without additional antimicrobials.

Applicants referred the Examiner to the data in the specification (Table 7, showing synergism with C6 + C8 without other antimicrobial, and Table 3 at page 45 of the specification showing PE2/DE1, HE2/OC1, PE1/HE1/OC1 and HE1/OC1/DE1 in comparison to single diols (3%)).

The Examiner said he would consider the data to see if it adequately supports the claims.

At this point the Examiner explained that it was his position that

- the prior art taught synergism
- the present claims did not exclude additional anti-microbial agents,
- the claims in present form (i.e., Amendment D after addition of "wherein said effective amount is that amount which results in a Kull value of less than 1 for the antimicrobial effect exhibited by said 1,2-alkanediols") reads on compositions where there is synergism, even if the synergism is a result of a 1,2-alkanediol plus a second antimicrobial,

- the newly proposed claim amendment "herein said effective amount is that amount which results in a Kull value of less than 1 for the antimicrobial effect exhibited by said mixture of 1,2-alkanediols") would prevent reading the claim on synergism produced by one alkanediol plus one other antimicrobial, thus would change the scope of the claim and require the Examiner to reconsider and do a new search, but

- it remained his position that even if the claim did not read on Cupferman (thus not anticipated by Cupferman), the claim was possibly obvious over Cupferman (synergism resulting from mixture of alkenediols is obvious over synergism resulting from one alkanediol plus one other antimicrobial) .

Applicants argued again that this was technically not a good argument.

The Examiner indicated he would consult with his supervisor and advise us of the results of this legal issue.

The Examiner further advised that, in view of the necessity of amending the main claim to tie the synergism to the mixture of the 1,2-alkanediols, and the after-final status of the application (so he would not authorize entry of the amendment) it would be necessary for Applicants to file a Request for Continued Examination (RCE).

Accordingly, Applicants file this RCE to enter the new claim limitations clarifying that the synergism is due to the mixture of the alkanediols, thus a synergistic mixture of an alkanediol and an other antimicrobial, where synergism is produced by the interaction of the one alkanediol and the other microbial, would not be within the scope of the claims . To be within the scope of the claims, the synergistic effect must be the result of the interaction between two specifically defined alkanediols.

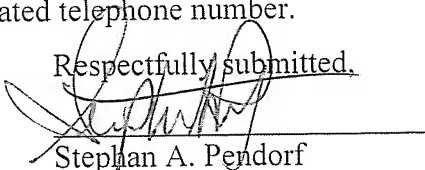
Accordingly, it is respectfully submitted that the claims as amended are in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account Number 50-0951.

Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.

**Date: September 18, 2007**

Respectfully submitted,

  
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